

Patent claims

1. A device for a drilling and/or percussive hammer having a tool receptacle (21) for holding a tool (22) and for transmitting a torque to the tool (22),
the tool receptacle (21) having:

- an essentially hollow cylindrical recess that forms the tool holder (33), having on an end surface an introduction opening (34) through which an insertion end (30) of the tool (22) can be introduced, and having on an opposite end surface an impact opening (35) through which an impact action can be applied to the insertion end (30),
- at least one rotational driver (36) formed on an inner side of the tool holder (33), and
- at least one locking element (37) that, in a locked state, is held in a predetermined radial position, and, in an unlocked state, is capable of movement at least radially out of the predetermined radial position,

characterized in that a stop surface (38) acting in the axial direction of the tool holder (33) is provided on an inner wall of the tool holder (33), in the area of the impact opening (35).

2. The device as recited in Claim 1, **characterized in that** the stop surface (38) has a conical construction.

3. The device as recited in Claim 1 or 2, **characterized in that**

- the tool (22) has:
 - + the insertion end (30), which is essentially cylindrical and is formed by a tool shaft,
 - + at least one rotational driver surface that is formed on the insertion end (30) and opens out at the end of the tool shaft, and
 - + at least one locking recess (31) that is formed in the insertion end (30) and is closed on both sides in the axial direction of the tool shaft;
- the rotational driver (36) is allocated to the respective rotational driver surface, and is fashioned such that the rotational driver surface can be pushed onto the rotational driver (36) when the tool

(22) is introduced.

- the at least one locking recess (31) has allocated to it the at least one locking element (37), which, in the locked state, is held in the locking recess (31), and in the unlocked state is capable of movement at least radially out of the locking recess (31), and in that
- the stop surface (38) acts as a stop surface for the insertion end (30).

4. The device as recited in one of Claims 1 to 3, **characterized in that** an introductory beveling (32) having the shape of a truncated cone is provided on the end surface (28) of the insertion end (30).

5. The device as recited in one of Claims 1 to 4, **characterized in that** the rotational driver (36) extends axially on the inside of the tool holder (33) up to the stop surface (38).

6. The device as recited in one of Claims 1 to 5, **characterized in that** the insertion end (30) is guided radially over its entire insertion length introduced into the tool holder (33).

7. The device as recited in one of Claims 1 to 6, **characterized in that**

- in the drilling and/or percussive hammer there is provided a pneumatic spring hammer mechanism (20) having a drive piston that is capable of being moved back and forth by a drive, and having an impact piston (24) that is capable of being driven by the drive piston,
- the impact piston (24) has a shaft (26) that is capable of being guided in an impact piston guide (27), and in that
- the stop surface (38) is situated at a transition from the impact piston guide (27) to the tool holder (33).

8. The device as recited in Claim 7, **characterized in that** the impact energy of the impact piston (24) is capable of being transmitted via its shaft (26) directly to the insertion end (30).

9. The device as recited in Claim 7 or 8, **characterized in that** the impact piston guide (27) has a hollow cylindrical construction and has at least one tangentially peripheral groove on its inside.

10. The device as recited in one of Claims 7 to 9, **characterized in that** the tolerance of the outer diameter of the shaft (26) of the impact piston (24) and of the inner diameter of the impact piston guide (27) are selected such that a gap is formed through which lubricant can flow from an area of the pneumatic spring hammer mechanism (20) into the tool holder (33).

11. The device as recited in one of Claims 7 to 10, **characterized in that** the diameter of the shaft (26) of the impact piston (24), or of an impact element that transmits the impact energy of the impact piston (24) to the insertion end (30), is smaller than the outer diameter of the insertion end (30).

12. The device as recited in one of Claims 7 to 11, **characterized in that** the diameter of the shaft (26) of the impact piston (24), or of an impact element that transmits the impact energy of the impact piston (24) to the insertion end (30), is smaller than the inner diameter of the introductory beveling (32), having the shape of a truncated cone, of the insertion end (30).

13. The device as recited in one of Claims 7 to 12, **characterized in that** the diameter of the shaft (26) of the impact piston (24), or of an impact element that transmits the impact energy of the impact piston (24) to the insertion end (30), is smaller than the diameter of a fictitious cylinder that is capable of being placed into the interior space in the tool holder (33) between the rotational driver or drivers (36).

14. The device as recited in one of Claims 1 to 13, **characterized in that** the stop surface (38) is stationary in relation to the tool holder (33).